

**IN THE CLAIMS:**

1-51. (Cancelled)

52. (New) A method of producing a gas discharge panel, comprising:

providing a first plate with partition walls and a phosphor layer;

providing a second plate;

providing a sealing material on at least one of the first plate and second plate;

forming an envelope of the second plate over the first plate to enable the partition walls to form light emitting cells;

applying a dry gas to the envelope;

exhausting gases from the envelope while heating the envelope below a sealing temperature of the sealing material for a sufficient time period to enable burn out of binding material of the sealing material;

monitoring the gas pressure applied to an inside of the envelope;

increasing the heat applied to the sealing material at the sealing temperature to enable softening of the sealing material;

determining from the gas pressure monitoring, when the gas pressure is increasing in the envelope;

lowering an internal pressure in the envelope, based on the monitoring of gas pressure, below an external pressure to apply a force to assist sealing of the first plate to the second plate;

lowering the temperature applied to the sealing material to solidify a peripheral seal;

21                   apply a cleansing gas after the envelope is sealed;  
22                   gradually lower the temperature to ambient temperature;  
23                   continuing to monitor the gas pressure applied within the envelope to determine  
24 any leaks in the peripheral seal;  
25                   applying a discharge gas to the sealed envelope, if no leaks are determined,  
26 through a gas passageway; and  
27                   closing the gas passageway to seal the discharge gas within the envelope.